Patent claims

1. A radio module (5) having a radio device (10), an internal microprocessor device (20) connected to the radio device and an interface (30) which is connected to the microprocessor device and has connection pins (S1, ..., S8) for connecting the radio module to at least one external electrical apparatus (50, 100, 110, 120, 130), where the radio module is designed such that it has at least two modes of operation in which it can be operated, specifically
   - a passive mode of operation, in which
     - an external microprocessor device (50) is connected to the radio module as an external electrical apparatus,
     - the radio module is used as a modem for the external microprocessor device, and
     - the radio module can be actuated by the external microprocessor device using modem actuation signals, preferably AT commands,
   - and at least one active mode of operation, in which
     - at least one actuator (100) or sensor (110) is connected to the radio module as an external electrical apparatus,
     - the radio module actuates and/or reads the at least one actuator or sensor and for its part can be actuated externally via the radio device,
   characterized in that
   - the electrical assignment of the connection pins is designed to be reconfigurable such that the microprocessor device uses at least one connection pin (S1, S2, S3, S4) both for the passive mode of operation and for one of the active modes of operation.

2. The radio module as claimed in claim 1,

characterized in that
- the microprocessor device is programmed with at
  least two software programs (200, 250), among
  which

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- one software program (250) forms the operating
  system of the radio module, which stipulates
  the electrical assignment of the connection
  pins for each of the at least two modes of
  operation of the radio module, and

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- at least one further software program forms
  application software (200) which stipulates
  the respective mode of operation of the radio
  module.

15 3. The radio module as claimed in claim 2,
    characterized in that
    - the application software can be altered
      externally by the user, whereas the operating
      system cannot be altered by the user.

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  4. The radio module as claimed in claim 3,
    characterized in that
    - the operating system (250) is formed by
      firmware.

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  5. The radio module as claimed in claim 3 or 4,
    characterized in that
    - the application software is interpreter
      software, preferably on the basis of the
30   programming languages Basic or Java®.

  6. The radio module as claimed in one of the
    preceding claims,
    characterized in that
35 - the application software and the operating
      system are separate from one another such that
      - the radio device and the interface can be
        actuated exclusively by the operating system,
        and

- the application software can access the
  interface and the radio device exclusively
  under the switching and control of the
  operating system, and
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- the application software is prevented from
  accessing the interface and the radio device
  directly.

7.   The radio module as claimed in one of the
10   preceding claims,
          characterized in that
          - the passive mode of operation is stored entirely
            in the operating system.